

## Improved Efficiency GaN-based Light Emitting Devices ABSTRACT

5           An optical semiconductor device having an active layer for generating light via the recombination of holes and electrons therein. The active layer is part of a plurality of semiconductor layers including an n-p junction between an n-type layer and a p-type layer. The active layer has a polarization field therein having a field direction that depends on the orientation of the active layer when the active layer is grown. In the present invention, the polarization field in the active layer has an orientation such that the polarization field is directed from the n-layer to the p-layer.